## (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

## (19) World Intellectual Property Organization

International Bureau





(43) International Publication Date 17 June 2004 (17.06.2004)

**PCT** 

(10) International Publication Number WO 2004/051170 A2

(51) International Patent Classification7:

F28F

(21) International Application Number:

PCT/KR2002/002263

(22) International Filing Date: 2 December 2002 (02.12.2002)

(25) Filing Language:

English

(26) Publication Language:

**English** 

(71) Applicant (for all designated States except US): LG ELECTRONICS INC. [KR/KR]; 20, Yoido-Dong, Yongdungpo-Ku, 150-010 Seoul (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): SHIN, Soo-Yeon [KR/KR]; Booyoung Apt. 1202-902 Wolsanmaeul, Boogok-Li, Jangyu-Myeon, 621-833 Gimhae, Kyungsangnam-do (KR). LEE, Seong-Hwan [KR/KR]; Wooseong Apt. 102-1303, Namyang-Dong, 641-091 Changwon, Kyungsangnam-Do (KR). CHO, Min-Chul [KR/KR]; 812-8, 2/3, Mandeok 1-Dong, Buk-Ku, 616-830 Busan (KR).

(74) Agent: PARK, Jang-Won; Jewoo Bldg. 5th Floor, 200, Nonhyun-Dong, Kangnam-Ku, 135-010 Seoul (KR).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

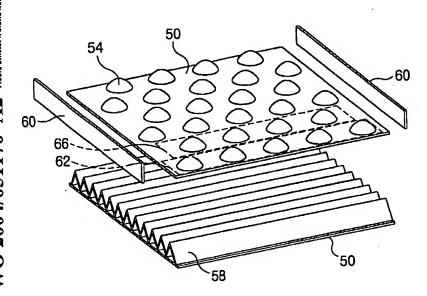
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

## Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: HEAT EXCHANGER OF VENTILATING SYSTEM



(57) Abstract: A heat exchanger of a ventilating system, including heat exchange plates which are laminated at a predetermined interval and divide an outdoor air path through which outdoor air passes and an indoor air path through which indoor air passes, and a plurality of embossing protrusions which are formed on the outdoor air path divided by the heat exchange plates, for generating turbulence in the outdoor air which flows in the outdoor air path, can improve heat transfer performance by controlling development of a boundary layer by differentiating structure of the air flow of an air path through which indoor air passes and an air path through which outdoor air passes.

WO 2004/051170 A2 |||||||||||||